

SCIENCE OF COMPUTER PROGRAMMING
VOLUME 26, NUMBERS 1-3, MAY 1996

Abstracted/Indexed in: ACM Computing Reviews, Cambridge Scientific Abstracts, Computer Abstracts, Computer Literature Index, Engineering Index/Compendex, INSPEC Information Services, Mathematical Reviews, Zentralblatt für Mathematik.

Mathematics of Program Construction

Guest Editor: B. Möller

CONTENTS

<i>M. Sintzoff</i> Editorial	1
<i>B. Möller</i> Preface	3
<i>R. Backhouse</i> Mathematics of program construction	5
<i>W. Turski</i> I was a computer	11
Calculational design	
<i>R.S. Bird</i> Functional algorithm design	15
<i>N. Shankar</i> Steps towards mechanizing program transformations using PVS	33
<i>K. Achatz and W. Schulte</i> Massive parallelization of divide-and-conquer algorithms over powerlists	59
<i>R.J.R. Back, A.J. Martin and K. Sere</i> Specifying the Caltech asynchronous microprocessor	79
<i>R. Berghammer and B. von Karger</i> Towards a design calculus for CSP	99
<i>M. Rusling</i> Deriving a class of layer-oriented graph algorithms	117

Programming techniques

K.R. Apt

Arrays, bounded quantification and iteration in logic
and constraint logic programming 133

A. Kaldewaij and V.J. Dielissen

Leaf trees 149

Programming in type theory

T. Coquand

An algorithm for type-checking dependent types 167

J.-F. Monin

Exceptions considered harmless 179

Mathematical foundations

S. Curtis and G. Lowe

Proofs with graphs 197

H. Doornbos and R. Backhouse

Reductivity 217

M. Frappier, A. Mili and J. Desharnais

A relational calculus for program construction by parts 237

K. Stølen

Refinement principles supporting the transition from
asynchronous unbounded to synchronous communication 255

Author index of Volume 26 273

